representation from the forming circuit and wherein verification requires a degree of dissimilarity.

REMARKS

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**."

Summary of Office Action

Claims 1 - 18 are currently pending. In the Office action, the following rejections were made:

- Claims 1 - 6 and 8 - 18 were rejected under 35 U.S.C. § 103 as being obvious in light of U.S. Patent 5,546,462 to Indeck ("The '462 patent") and in view of U.S. Patent 5,616,904 to Fernandez ("The '904 patent"); and

- Claim 7 was rejected under 35 U.S.C. § 103 as being obvious in light of the '462 patent, the '904 patent and U.S. Patent 5,920,628 to Indek et al. ("the '628 patent").

Response to Office action

In response to the Office action, the applicant has amended claim 6 and added new claims 19 - 23.

Claims 1 -6 and 8 - 18

Claims 1 - 6 and 8 - 18 were rejected as being obvious in light of the '462 patent and the '904 patent. The rejection was based on the assertion that Indeck taught all of the limitations of claim 1, except the limitation of a waveform circuit. The rejection states that a waveform circuit is taught in the '904 patent. The rejection also states that the '462 patent contains a suggestion to combine the teachings of the '462 patent with the teachings of the '904 patent, because the '462 patent suggests that ranges are acceptable because

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of inaccuracy in measurements of the magnetic fingerprinting, and noise in the head and electronics. The rejection further states that the combination of the two references would have been obvious at the time because this would make the potential forger susceptible to two different techniques and two possible modes of exposure, decreasing the likelihood of forgery.

Applicants respectfully submit that one of ordinary skill in the art at the time of the invention would not have been motivated to combine the selected teachings of the '462 patent with the selected teachings of the '904 patent. Indeed, one of ordinary skill in the art would be taught away from the combination of the selected teachings by these two references. The '904 patent specifically emphasizes the undesirability of a circuit possessing the digitizer of claim 1 as can be seen from comments made in relation to prior art systems similar to the system described in the '462 patent, which possess digitizers:

> However, it involves the use of analog patterns which are complex and expensive and hard to analyze. Interfacing the existing systems is difficult because of space occupied on the circuit card, to fully utilize the technology. Furthermore it requires the use of expensive circuitry such as A/D converters.
>
> . . .
>
> It is a feature of the invention that the data verification method can be implemented with relatively inexpensive digital circuitry (Col 1: 41 - 57).

In light of the statements in the '904, applicants submit that one of ordinary skill in the art would be taught the undesirability of a circuit utilizing a digitizer of claim 1 and, therefore, would

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not be motivated to combine the teachings of a waveform circuit with the teachings of a reference that relies upon the use of a digitizer.

Applicant respectfully submits that there is no basis for the assertion in the Office action that one of ordinary skill in the art at the time would have been motivated to combine the selected teachings of the two references, because this would make the potential forger susceptible to two different techniques and two possible modes of exposure, decreasing the likelihood of forgery. Both references are concerned with detecting attempts to fraudulently reproduce data stored on a magnetic stripe card, however, neither reference addresses the need for detecting attempts to forge magnetic fingerprints. Using a combination of two techniques designed to detect copying of data may not detect forgeries involving the reproduction of the characteristics of the magnetic stripe relied upon by the data verification techniques. Applicants submit that the rejected claims are directed towards preventing attempts by forgers to reproduce magnetic fingerprints in addition to data recorded on a magnetic stripe, which is not addressed by the combination proposed in the Office action.

Claim 7

Claim 7 depends from claim 6 and contains the additional limitation that:

> . . . the storage stores a plurality of document identification representations for comparison with a document identification representation from the forming circuit and wherein verification requires a degree of dissimilarity.

The Office action asserts that the combination of the '462 and '904 patents teaches the limitations of claim 6 and that the

combination of these references with the teachings of the '628 patent renders claim 7 obvious.

Applicants submit that the '462 and '904 patents do not teach the limitations of claim 6 for the reasons outlined above. In addition, Applicants submit that the statement in the '904 patent of the undesirability of an A/D converter teaches away from the combination of the '904 with the '628 patent, because the techniques described in the '628 patent involve the use of an A/D converter (see Col 14: 31 - 40).

Applicants agree that the '628 patent teaches methods for avoiding on-line interception as indicated in the Office action. However, Applicants cannot find even a suggestion within the '628 patent of avoiding on-line interception by rejecting documents based on the lack of sufficient *dissimilarity* between a document identification representation generated by a forming circuit and a stored document identification representation. The following excerpt is illustrative of the methods taught by the '628 patent, which involve the rejection of documents based *only* on a lack of sufficient *similarity* between a document identification representation generated by a forming circuit and a stored document identification representation:

> When an individual desires to access, for example, a computer network, the network can precondition access upon the user's ability to successfully transmit fingerprint data for one or more selected portions of a magnetic passcard. In this embodiment, the network will first convey a selection command to the user which indicates a specific portion or portions of the magnetic passcard for which remanent noise is to be determined. The user's computer will then determine the remanent noise for the selected portion of the medium, and will convey a digital

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or other code representation thereof to the network. Meanwhile, the network will retrieve from a central database previously stored remanent noise data for the selected portion of that user's magnetic passcard. If the fingerprint data provided by the user correlates with the retrieved remanent noise data for the selected portion of the magnetic medium, the magnetic medium will be authenticated and the user's possession thereof will be verified. Accordingly, the user will be granted access to the network.

The next time the user desires to access the network, a similar operation will be performed, but a different or additional portion of the magnetic passcard will most likely be selected by the network for authentication purposes. In other words, a random or non-repeating selection algorithm can be employed for selecting the portion of the magnetic medium used during each authentication process. In this manner, any electronic eavesdropping or on-line data interception of the fingerprint data provided to the network by the user is rendered harmless, as the provided data is guaranteed to be valid for this access attempt only.

. . .

If the user provides fingerprint data derived from the remanent noise for portion "A," and this code correlates with previously stored remanant noise data for portion "A" of the mangetic data card 210 as retrieved by the network from a central database, the card will be authenticated and access will be granted. Subsequently, when the user again seeks access to the network, the network will select a different portion of the magnetic stripe 212 for remote authentication purposes, such as portion "C" which is

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completely distinct form portion "A," or portion "B" which overlaps the previously selected portion "A," or portion "D" which has a smaller read length than portion "A" (Col 19: 55 - Col 20: 47).

Applicant respectfully submits that the above excerpt illustrates that the method taught by the '628 patent relates to modifying the portion of the magnetic stripe used for verification in order to prevent on-line interception of verification data and that the '628 patent does not teach the limitation of the claimed invention that involves rejecting documents based on an improbable degree of similarity between the document and stored verification data.

Claims 19 - 23

Applicant respectfully submits that claims 19 - 23 are allowable, because the references cited by the Examiner do not teach the limitations of any of the claims.
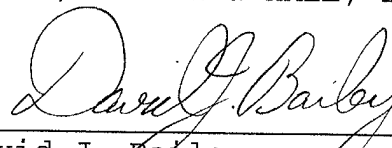
Conclusion

Applicant believes that the claims pending in the case are in condition for allowance, and an early notice of allowability is respectfully solicited. Applicant also wishes to draw the examiner's attention to the enclosed document evidencing the limited recognition granted to David J. Bailey under 37 C.F.R. §10.9(b) to prosecute patent applications on behalf of Christie Parker & Hale LLP. If the Examiner believes that a telephone conference with Applicant's attorney might expedite prosecution of the application, please do not hesitate to call at the telephone number indicated below.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By   _David J. Bailey_
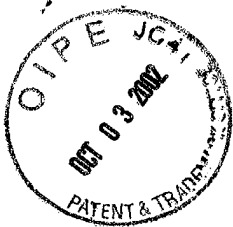
David J. Bailey
Recognition under 37 CFR § 10.9(b)
626/795-9900

DJB/syb

VERSION WITH MARKINGS TO SHOW CHANGES MADE

6.   (Amended) An identification system according to claim [1]5 further including storage to store document identification representations and a comparison structure for comparing document identification representations from the storage with document identification representations from the forming circuit to verify a document.

SYB IRV1057135.1-*-9/26/02 10:26 AM

BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATE PATENT AND TRADEMARK OFFICE

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

David J. Bailey is hereby given limited recognition under 37 CFR § 10.9(b) as an employee of Christie, Parker & Hale LLP to prepare and prosecute patent applications wherein the patent applicant is a client of Christie, Parker & Hale LLP, and the attorney or agent of record in the applications is a registered practitioner who is a member of Christie, Parker & Hale LLP. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) David J. Bailey ceases to lawfully reside in the United States, (ii) David J. Bailey's employment with Christie, Parker & Hale LLP ceases or is terminated, or (iii) David J. Bailey ceases to remain or reside in the United States on an H-1 visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: December 4, 2002

Harry I. Moatz
Director of Enrollment and Discipline